

Entomophily

↳ Pollination by insects.

• Brightly color flower or any part of flower.

Eg - In Bougainvillea (flower → dull, pale in color)

↳ Bract is colored.

In Euphorbia → Leaf is colored.

In Mussaenda → Sepal is colored.

• Scent / smell

↳ Night blooming flowers are generally pale colored because color has no significance in night. So, they are strongly fragrant.

Eg - Jasmine, Rafflesia

- Normally flowers are conspicuous i.e. they are easily visible.
If flowers are small, they are present in clusters.

Eg - Capitulum of Sunflower

- May produce edible pollen grains.

Eg - Rosa, Papaver.

- Nectar gland

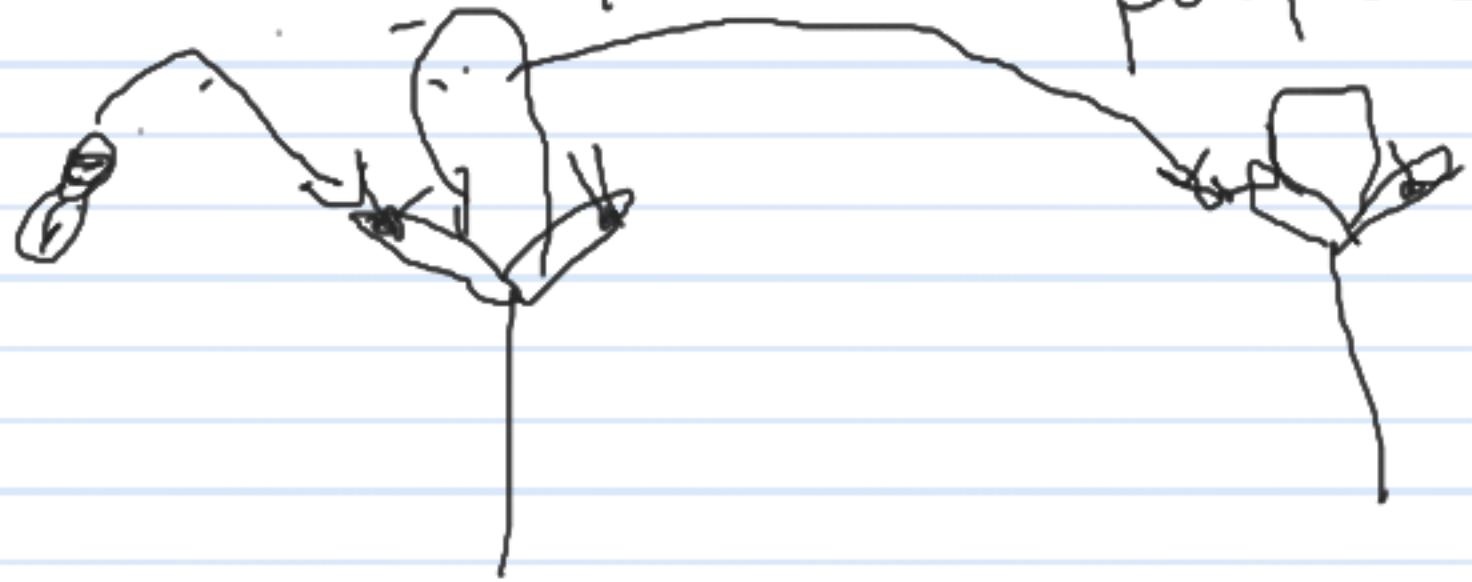
Eg - Antirrhinum

Common Examples

P.T.O

a) Orchid

↳ Petals look like ♀ moth. The male moth comes and sit on the petals for copulation, and the pollen sticks on it and again it goes to another flower for the same purpose. In this way pollination occurs.



It is an example of Pseudocopulation

b) Yucca flower

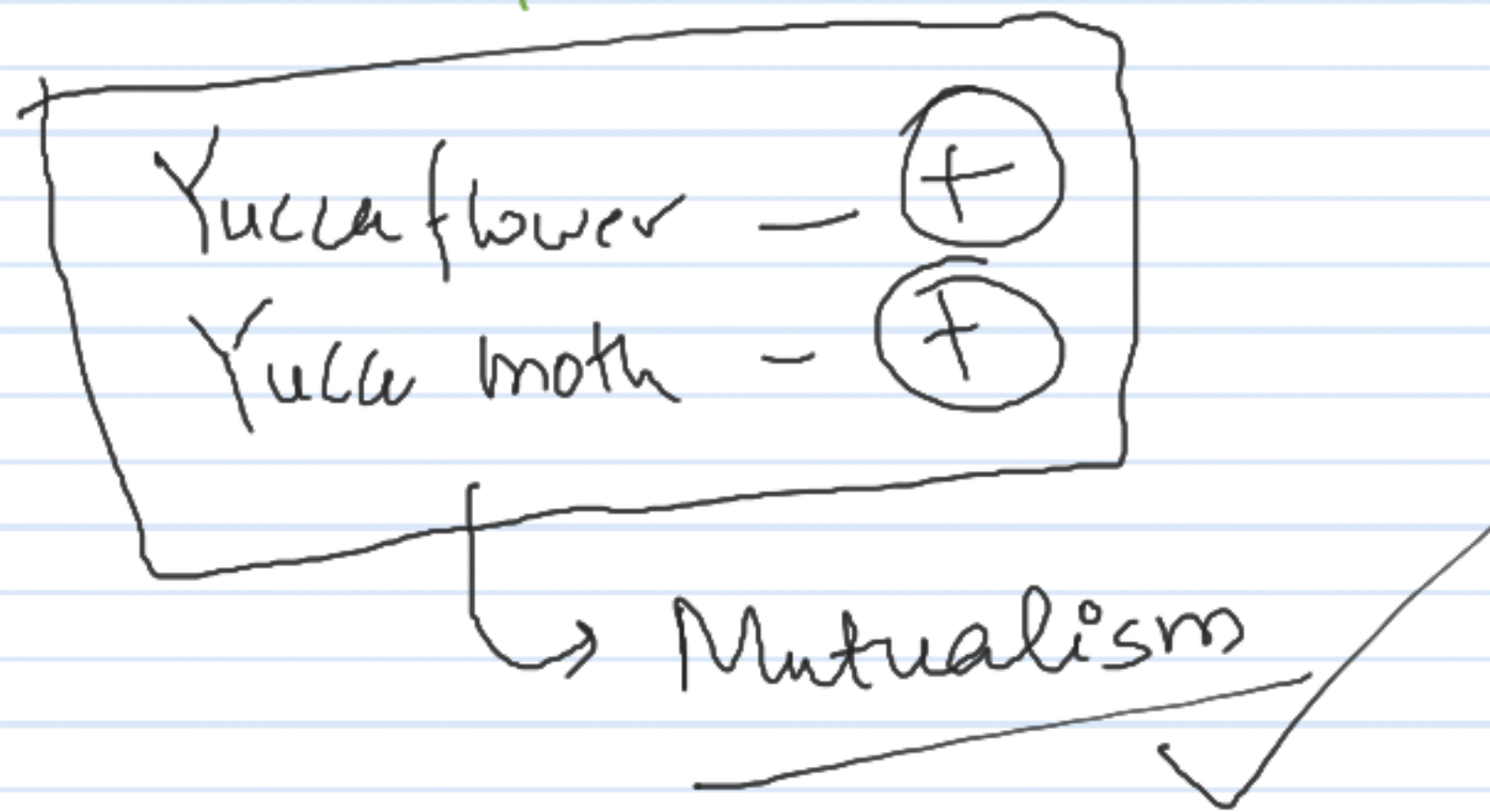
↳ Pollination is by a moth

→ Commonly known as Yucca moth

→ Scientific name

Protonuba yuccasetto

→ Flower & moth have mutual relationship. Moth drills inside the ovary and lay its eggs. The moth then seals the ovary with Yucca pollen grain. In this way the plant gets pollinated. On the other hand the larva feeds on some tissue and their development takes place as well as this provides them safety.

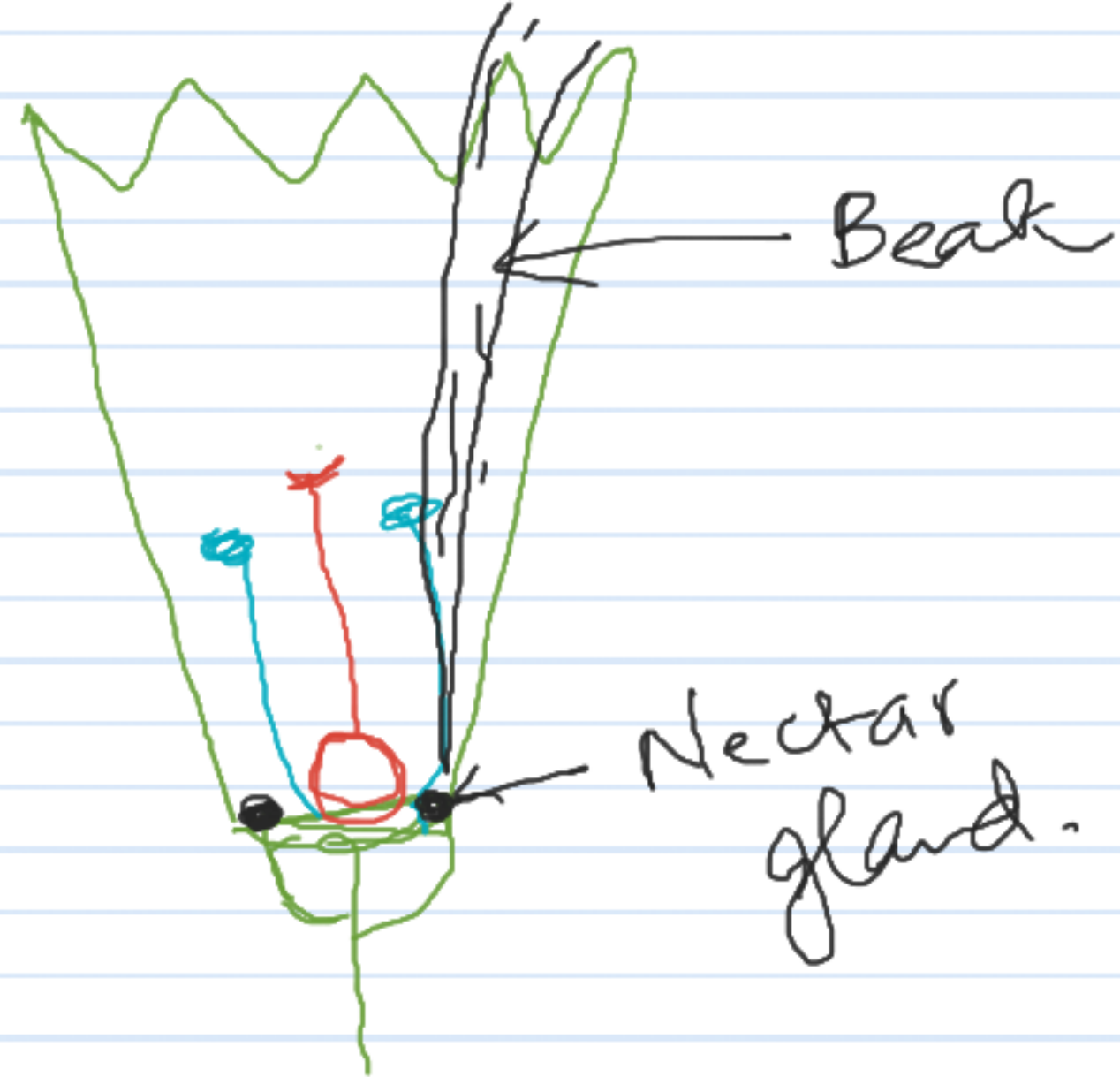


Ornithophily

↳ Pollination by birds.

- Brightly colored
- Nectar gland.

Eg - Bottle brush
Silk cotton.



Chiropterophily

↳ Pollination by Bats ↳ Nocturnal.

- Night blooming flower
- Smell - Rotten fruits

large flowers to
handle bats
weight.

Eg - Kigella pinnata

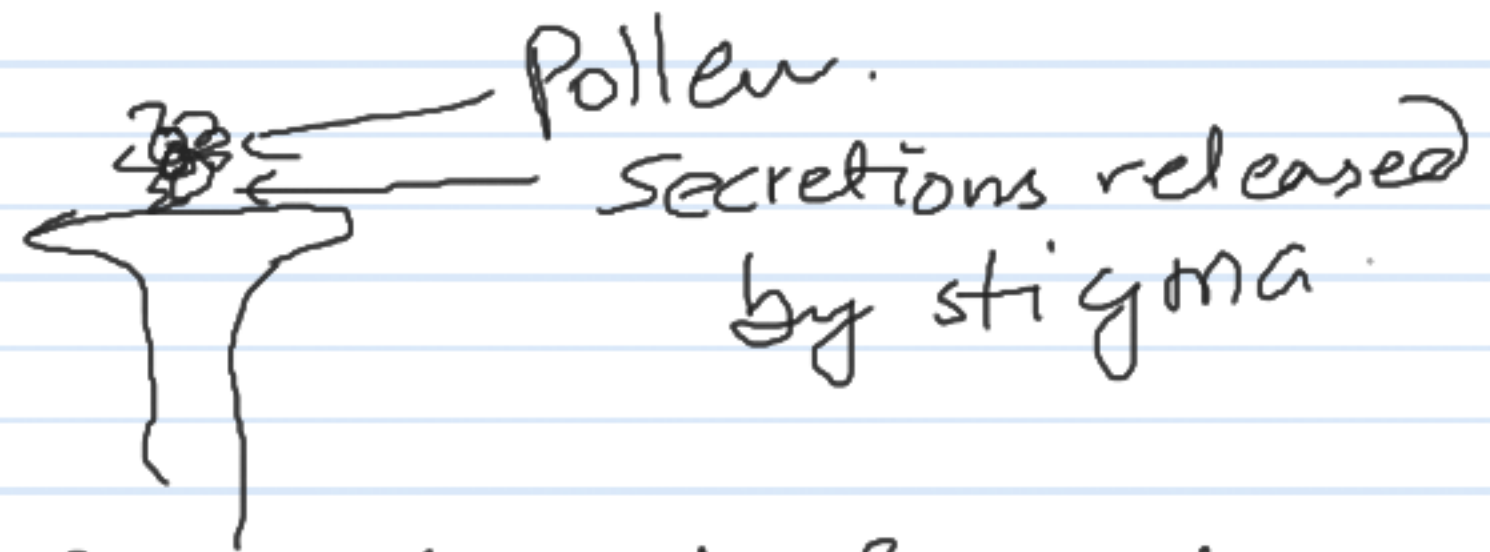
Fertilization

↳ Described and explained by Strasburger.

↳ Fusion of σ° and ♀ gametes.

Steps :-

① Pollen - Pistil interaction.



② Stigma releases secretion. The main components of secretion are water and sugar. This liquid is absorbed by pollen through germ pore.

③ From germ pore tube like structure emerges. This process is known as germination of pollen grain. The tube which emerges is called pollen tube. Generally only one pollen tube emerges.

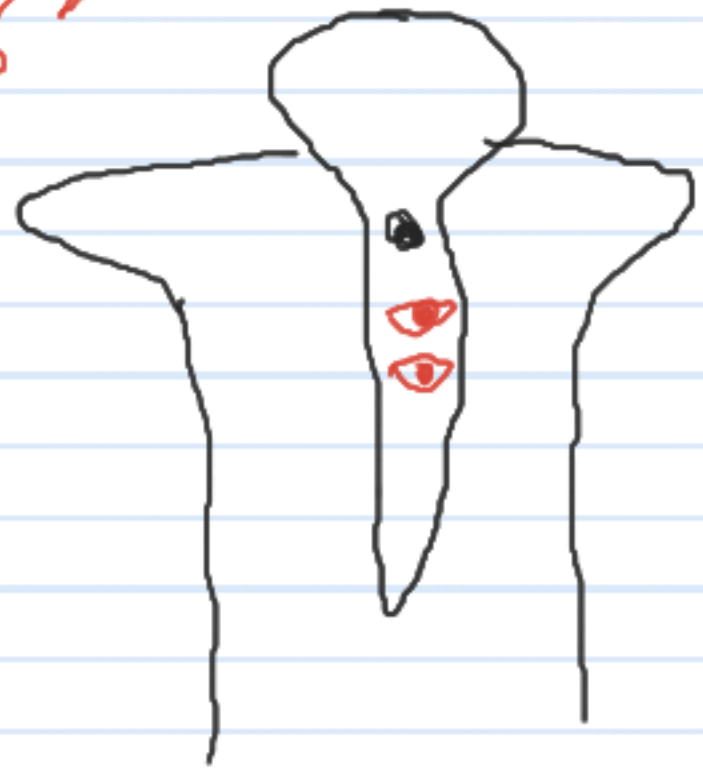
→ Monosiphones → Single pollen tube
→ Polysiphones → Multiple " "

* Even many pollen tubes emerge, but only single tube is & each the embryo, rest will degenerate.

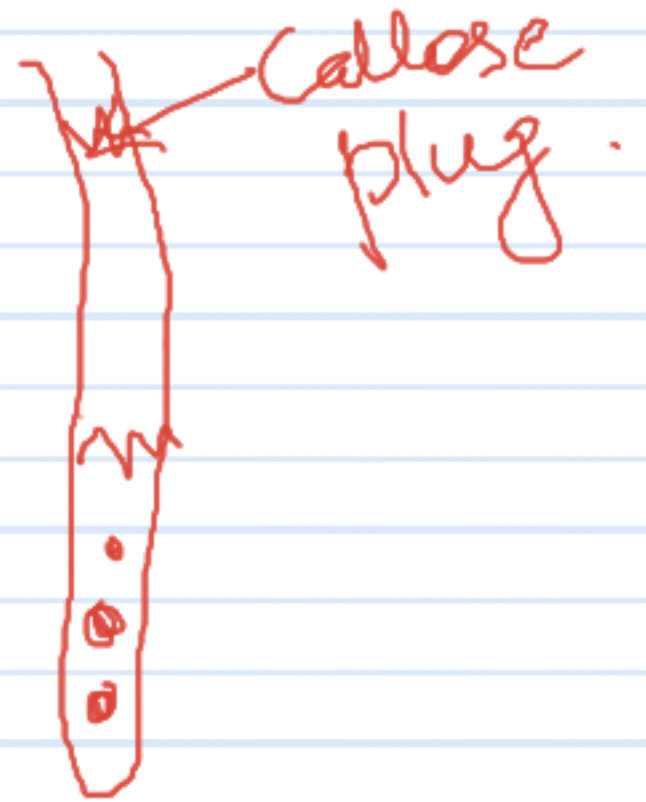
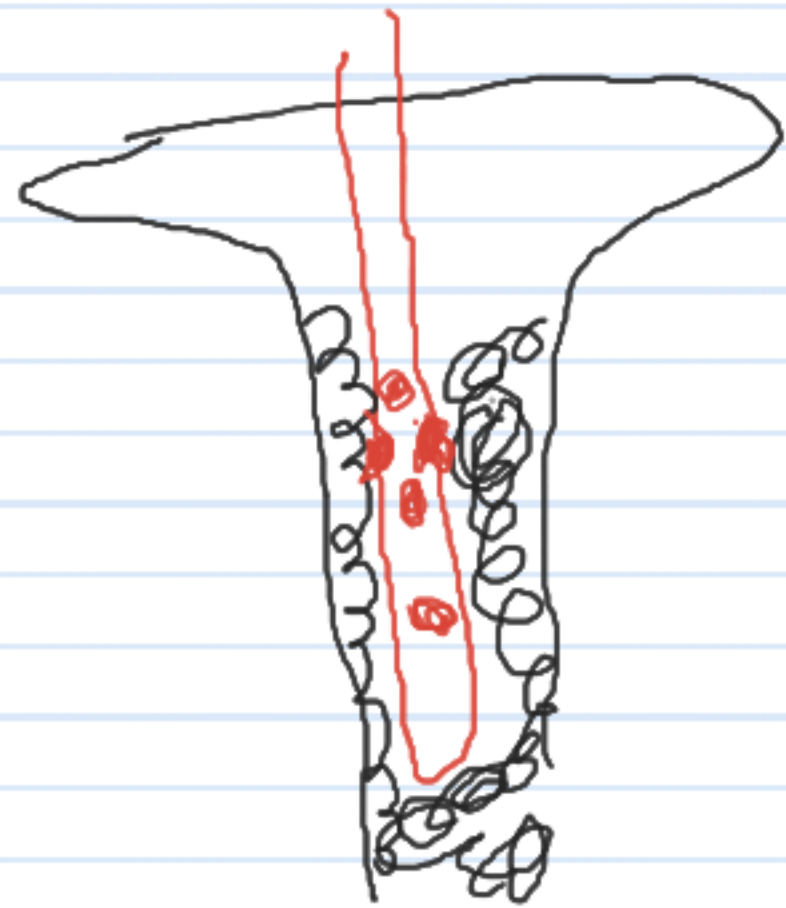
④ The growth of pollen tube.



Generative cells undergoes one mitotic division forming 2 male gametes



When the tube is moving down in solid style there is a chance of pollen tube getting squeezed because of connective cells and in that case some content may will remain in either upper part or lower part. To avoid this callose plugs are formed.



* Possibilities of pollen tube to enter ovule :-

a) Through Chalaza → Chalazogamy.

b) " integuments → Mesogamy -

c) " micropyle → Porogamy

Most common
in angiosperms.

